

1. Record Nr.	UNINA9910155602103321
Autore	Dekker Sidney
Titolo	Drift Into Failure
Pubbl/distr/stampa	CRC Press
ISBN	1-351-94292-1
Descrizione fisica	1 online resource (234 p.)
Disciplina	302.3/5
Soggetti	System theory Failure analysis (Engineering)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>What does the collapse of sub-prime lending have in common with a broken jackscrew in an airliner's tailplane? Or the oil spill disaster in the Gulf of Mexico with the burn-up of Space Shuttle Columbia? These were systems that drifted into failure. While pursuing success in a dynamic, complex environment with limited resources and multiple goal conflicts, a succession of small, everyday decisions eventually produced breakdowns on a massive scale. We have trouble grasping the complexity and normality that gives rise to such large events. We hunt for broken parts, fixable properties, people we can hold accountable. Our analyses of complex system breakdowns remain depressingly linear, depressingly componential - imprisoned in the space of ideas once defined by Newton and Descartes. The growth of complexity in society has outpaced our understanding of how complex systems work and fail. Our technologies have gotten ahead of our theories. We are able to build things - deep-sea oil rigs, jackscrews, collateralized debt obligations - whose properties we understand in isolation. But in competitive, regulated societies, their connections proliferate, their interactions and interdependencies multiply, their complexities mushroom. This book explores complexity theory and systems thinking to understand better how complex systems drift into failure. It studies sensitive dependence on initial conditions, unruly technology, tipping points, diversity - and finds that failure emerges opportunistically,</p>

non-randomly, from the very webs of relationships that breed success and that are supposed to protect organizations from disaster. It develops a vocabulary that allows us to harness complexity and find new ways of managing drift.

---